

ABSTRACT:

Abstract: The distribution and bioavailability of heavy metals in the environment is of particular concern because of their potential toxicity to the ecosystem. A study was conducted to investigate the impact of informal industries (commonly known in Kenya as *Jua kali* industries) on the heavy metal distribution and bioavailability indices in selected tropical urban soil samples from Nakuru town, Kenya. The study revealed that both the total metal contents and the bioavailability indices varied with the soil site and depended upon the intensity of industrial activities (painting, oil spills from engine overhauls, deposited wastes) on the sites. The informal industrial sites had higher levels of heavy metal content than the non-industrial sites, indicating that the informal industrial activities in these areas contributed to the elevated amounts of heavy metals. The mean heavy metal content in the informal industrial sites was highest for Zn followed by Fe, Pb, Mn and Cu. In the non-industrial sites, the trend was the same; however, lower values were obtained. The amounts of heavy metal extracted varied with the nature of the extractant. AAAC-EDTA extracted the highest amounts of the metals both from the industrial and non-industrial sites. The AAAC-EDTA extractable metal could be taken as the bioavailability index of the metals for the soils studied. The study is of significance in developing regulations for setting up informal industrial sheds in relation to micro-urban farming.